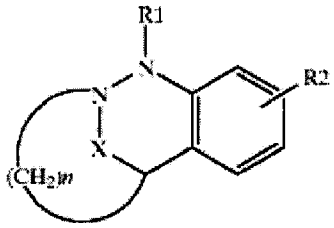
AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1. (previously presented) A compound of formula (I), or a pharmaceutically acceptable salt thereof with a base or acid:

in which:



(I)

n is 1;

R1 is selected from the group consisting of hydrogen, alkyl having up to 8 carbon atoms and $(CH_2)_n'R^o_1$ in which n' is 0 or 1 and R^o_1 is selected from the group consisting of aryl having up to 12 carbon atoms; heteroaryl having up to 15 carbon atoms and at least one heteroatom selected from N, S, and O; COR'; CONR'R"; CSNR'R"; COCOOR'; $SO_2NR'R"$; SO_2R'; CO_2R' and CN;

R' is selected from the group consisting of hydrogen, alkyl having up to 8 carbon atoms, alkenyl having up to 8 carbon atoms, aralkyl having up to 12 carbon atoms and aryl having up to 12 carbon atoms;

R" is selected from the group consisting of hydrogen; alkyl having up to 8 carbon atoms; aryl having up to 12 carbon atoms; aralkyl having up to 12 carbon atoms; SO_2-R' and COR'; in each case R' being independently selected from the group consisting of

hydrogen, alkyl having up to 8 carbon atoms, alkenyl having up to 8 carbon atoms, aralkyl having up to 12 carbon atoms and aryl having up to 12 carbon atoms;

R2 is selected from the group consisting of hydrogen, halo, alkyl, OH, Oalkyl, NO_2, NH_2, NHalkyl, $N(alkyl)_2$, NHCOalkyl, $NHSO_2$alkyl, CONHalkyl, SO_2NHalkyl, COOH, COOalkyl, CN, OSO_2alkyl, NHCONHalkyl and COalkyl; said alkyl having up to 8 carbon atoms;

X is a divalent group -C(O)-N(OR_3)- connected to the ring nitrogen atom via its carbonyl carbon atom and to the ring carbon atom via its nitrogen atom, in which R_3 is selected from the group consisting of hydrogen and the R, Y, Y_1, Y_2 and Y_3 moieties defined below;

R is selected from the group consisting of alkyl having up to 6 carbon atoms, optionally substituted by pyridyl or carbamoyl; alkenyl having up to 8 carbon atoms; aryl having up to 12 carbon atoms; and aralkyl having up to 12 carbon atoms; each said aryl group optionally being substituted by an -OH, $-NH_2$, $-NO_2$, alkyl having up to 8 carbon atoms, an alkoxy having up to 8 carbon atoms or by one or more halogens;

Y is selected from the group consisting of COR, COOH, COOR, CONHR, CONHOH, $CONHSO_2R$, CH_2COOH, CH_2COOR, $CH_2CONHOH$, $CH_2CONHCN$, CH_2tetrazole, CH_2(protected tetrazole), CH_2SO_3H, CH_2SO_2R, $CH_2PO(OR)_2$, $CH_2PO(OR)(OH)$, $CH_2PO(R)(OH)$ and $CH_2PO(OH)_2$, wherein R is as defined hereinabove;

Y_1 is selected from the group consisting of SO_2R, SO_2NHCOR, $SO_2NHCOOR$, $SO_2NHCONHR$ and SO_3H, wherein R is as defined hereinabove;

Y_2 is selected from the group consisting of $PO(OH)_2$, $PO(OR)_2$, PO(OH)(OR) and PO(OH)(R), wherein R is as defined hereinabove;

Y_3 is selected from the group consisting of tetrazole, tetrazole substituted by R, squarate, NRtetrazole, NRtetrazole substituted by R, and $NRSO_2R$, wherein R is as defined above, including the pure enantiomers thereof, in the R, S or RS configuration, as well as any racemic mixture of said enantiomers.

2. (previously presented) A compound as claimed in claim 1, wherein n is 1.

3. (previously presented) A compound as claimed in claim 1, wherein R2 is hydrogen.

4. (previously presented) A compound as claimed in claim 1, wherein R1 is hydrogen, alkyl having up to 8 carbon atoms or $(CH_2)_{n'}R^{o}_1$ wherein n' is 0 or 1 and R^{o}_1 is aryl having up to 12 carbon atoms; heteroaryl having up to 15 carbon atoms and at least one heteroatom selected from N, S, and O; CONR'R"; CSNR'R"; COCOOR'; $SO_2NR'R"$; SO_2R' or CO_2R'; R' and R" being as defined in claim 1.

5. (previously presented) A compound as claimed in claim 1, wherein X is a divalent group -C(O)-N(OR_3)- in which R_3 is selected from the group consisting of hydrogen and the R, Y and Y_1 radicals, R, Y and Y_1 being as defined in claim 1.

6. (previously presented) A compound of formula (I) as defined in claim 1, selected from the group consisting of:

[[1,5-dihydro-1-(methylsulfonyl)-3-oxo-2,5-methano-2*H*-1,2,4-benzotriazepin-4(3*H*)-yl]oxy]acetic acid,

[[1-[(benzoylamino)carbonyl]-1,5-dihydro-3-oxo-2,5-methano-2*H*-1,2,4-benzotriazepin-4(3*H*)-yl]oxy]acetic acid,

[[1,5-dihydro-3-oxo-1-[(phenylsulfonyl)aminocarbonyl]-2,5-methano-2*H*-1,2,4-benzotriazepin-4(3*H*)-yl]oxy]acetic acid,

[(1,5-dihydro-3-oxo-2,5-methano-2*H*-1,2,4-benzotriazepin-4(3*H*)-yl)oxy]acetic acid,

4,5-dihydro-1-methyl-4-(sulfooxy)-2,5-methano-2*H*-1,2,4-benzotriazepin-3(1*H*)-one,

4,5-dihydro-4-(2-propenyloxy)-1-(3-pyridinylmethyl)-2,5-methano-2*H*-1,2,4-benzotriazepin-3(1*H*)one,

4,5-dihydro-3-oxo-*N*-(phenylsulfonyl)-4-(2- propenyloxy)-2,5-methano-2*H*-1,2,4-benzotriazepine-1(3*H*)-carboxamide,

N-benzoyl-4,5-dihydro-3-oxo-4-(2-propenyloxy)-2,5-methano-2*H*-1,2,4-benzotriazepine-1(3*H*)-carboxamide,

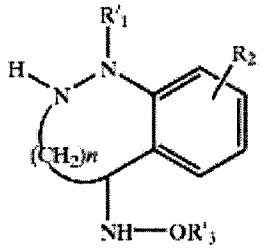
ethyl 4,5-dihydro-α,3-dioxo-4-(2-propenyloxy)-2,5-methano-2*H*-1,2,4-benzotriazepine-1(3*H*)-acetate,

ethyl 4,5-dihydro-3-oxo-4-(sulfooxy)-2,5-methano-2*H*-1,2,4-benzotriazepine-1(3*H*)-acetate,

and their salts and enantiomers as defined in claim 1.

7. (currently amended) A process for the preparation of a compound as claimed in claim 1, which process comprises: a) a first stage during which a compound of formula (II):

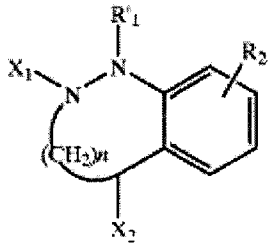
(II)



in which:

R'_1 is R1 ~~or a precursor thereof~~, R_2 is R2, and R2 and n are as defined in claim 1 and R'_3 is selected from the group consisting of a protective group for hydroxyl, Rp, Yp, Y_1p, Y_2p and Y_3p, which, respectively, correspond to R, Y, Y_1, Y_2 and Y_3 as defined in claim 1, in which the possible reactive functional groups present are, if appropriate, protected, is reacted with a carbonylating agent, if appropriate in the presence of a base, for the purpose of obtaining an intermediate compound of formula (III):

(III)



in which:

R'_1 and R_2 are defined above, and R2 and n are as defined in claim 1 and either (1) X_1 is hydrogen and X_2 represents an $-N(OR'_3)-CO-X_3$ group, wherein R'_3 is as defined above and X_3 is the residue of the carbonylating agent, or (2) X_2 is $-NH-OR'_3$ and X_1 is $CO-X_3$ group, X_3 being as defined above;

and b) a second stage during which the intermediate of formula III obtained above is cyclized, in the presence of a base.

8. (previously presented) The process of claim 7 further comprising, either before stage a) or after stage b), as appropriate:

c) one or more of the following reactions, in an appropriate order:

- protection of the reactive functional groups,
- deprotection of the reactive functional groups,
- esterification,
- saponification,
- sulfonation,
- phosphatation,
- amidation,
- acylation,
- sulfonylation,
- alkylation,
- formation of a urea group,
- introduction of a tetrazole group,
- reduction of carboxylic acids,
- dehydration of amide to nitrile,
- salification,
- exchange of ions,
- separation of enantiomers,
- nitration,
- reduction of a nitro to an amino,
- halogenation,

- carbamoylation,

- introduction of a cyano group.

9. (previously presented) The process as claimed in claim 7, wherein the carbonylating agent is selected from the group consisting of phosgene, diphosgene, triphosgene, aryl, aralkyl, alkyl and alkenyl chloroformates, alkyl dicarbonates, carbonyidiimidazole and their mixtures.

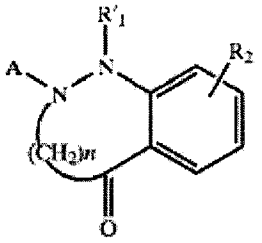
10. (previously presented) The process as claimed in claim 7, wherein the carbonylation reaction takes place in the presence of a base.

11. (previously presented) The process as claimed in claim 7, wherein, in stage b), the base is selected from the group consisting of amines, alkali metal hydrides, alkoxides, amides and carbonates and alkaline earth metal hydrides, alkoxides, amides and carbonates.

12. (previously presented) The process as claimed in claim 11, wherein the base is an amine.

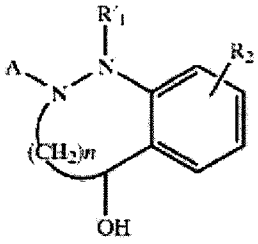
13. (currently amended) The process as claimed in claim 7, wherein the compound of formula (II) is obtained by a process wherein a compound of formula (IV):

(IV)



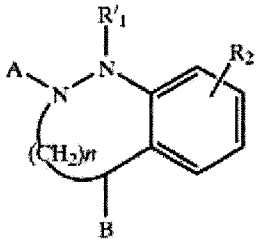
in which R'_1 and R_2 are as defined in claim 7, ~~and R2 and n are as defined in claim 1~~ R2 is selected from the group consisting of hydrogen, halo, alkyl, OH, Oalkyl, NO_2, NH_2, NHalkyl, $N(alkyl)_2$, NHCOalkyl, $NHSO_2$alkyl, CONHalkyl, SO_2NHalkyl, COOH, COOalkyl, CN, OSO_2alkyl, NHCONHalkyl and COalkyl; said alkyl having up to 8 carbon atoms and n is 1, and A is hydrogen or a protective group for the nitrogen, is treated with a reducing agent, to obtain a compound of formula (V):

(V)



in which A is defined above, R'_1 and R_2 are as defined in claim 7, and R2 and n are as defined above ~~in claim 1~~, and in which process, if appropriate, the OH group is replaced by a leaving group, to obtain a compound of formula (VI):

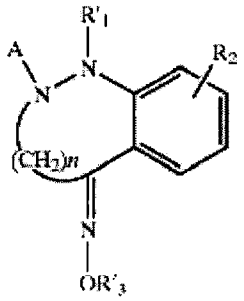
(VI)



in which A is defined above, R'_1 and R_2 are as defined in claim 7, and R2 and n are as defined <u>above</u> ~~in claim 1~~, and B represents a leaving group, which compound of formula VI is then treated with a compound of formula NH_2-OR'_3, R'_3 being as defined in claim 7, and then, if appropriate, with an appropriate deprotecting agent for the nitrogen atom.

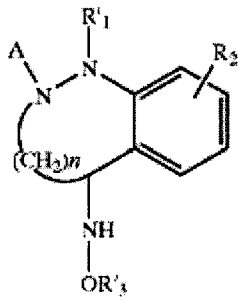
14. (currently amended) The process as claimed in claim 13, wherein the compound of formula (II) is obtained by a process wherein a compound of formula (IV) as defined in claim 13 is treated with a compound of formula H_2N-OR'_3, to obtain a compound of formula (VII):

(VII)



in which A is as defined in claim 13, and R'_1 and R_2 are as defined in claim <u>13</u> [[7]], and R2 and n are as defined in claim <u>13</u> [[1]], and R'_3 is as defined in claim <u>13</u> [[7]], which compound of formula VII is then reacted with a reducing agent, to obtain a compound of formula (VIII):

(VIII)



in which A is as defined in claim 13, R'_1 and R_2 are as defined in claim 13 [[7]], and R2 and n are as defined in claim 13 [[1]], and R'_3 is as defined in claim 13 [[7]], which compound of formula VIII is then treated, if appropriate, with an appropriate deprotecting agent for the nitrogen atom.

15. (previously presented) A pharmaceutical composition comprising the compound as defined in claim 1 in combination with a pharmaceutically acceptable carrier.

16. (previously presented) A pharmaceutical composition comprising the compound as defined in claim 6 in combination with a pharmaceutically acceptable carrier.

17 -21. (cancelled)

22. (previously presented) A method of treating a bacterial infection in a mammal comprising administering to a mammal in need thereof an antibacterially effective amount of a compound of claim 1.

23. (previously presented) A method of treating an infection or infection-causing condition in a mammal that is due to the presence of bacteria that generate beta-lactamases, which comprises administering to a mammal in need thereof an amount of a compound of claim 1 that is effective to inhibit the generation of beta-lactamases by the bacteria in said mammal.